

AMENDMENT TO THE CLAIMS

1. (currently amended) An apparatus for coupling one of a battery charger and a battery tester to a battery, comprising:

a cable including a main electrical conductor capable of carrying a charging current and first and second electrical conductors, wherein at least one of first and second electrical conductors provide a Kelvin connection capability for injecting a forcing function into the battery and measuring a voltage across the battery;

a first elongate clamp member of a clamp having a first jaw end and a first hand grip end separated by a first pivot coupling, the first elongate clamp member having a conductive piece coupled to the first jaw end for making contact with a contact of the battery and the first hand grip having a first hole formed therein;

a second elongate clamp member of the clamp having a second jaw end and a second hand grip end separated by a second pivot coupling, the second elongate clamp member pivotally joined to the first elongate clamp member by the first and second pivot couplings whereby the first and second jaws are generally aligned together;

a terminal electrically coupled to the main electrical conductor having a terminal hole formed therein aligned with the first hole in the first hand grip;

a removable fastener which couples the terminal to the first hand grip through the first hole and the terminal hole whereby the first hand grip can be disconnected from the main electrical conductor;

a first electrical plug electrically coupled to the conductive piece through at least one of first and second wire connectors of the clamp; and

a second electrical plug electrically coupled to the first and second electrical conductors of the cable, the second electrical plug configured to removably electrically couple with the first electrical plug to couple the first wire connector with the first electrical conductor and the second wire connector with the second electrical conductor, wherein the first electrical plug and the second electrical plug are housed in the first hand grip when electrically coupled together.

2. (canceled)

3. (previously presented) The apparatus of claim 1, wherein the main electrical conductor is capable of carrying a high current.

4-5. (canceled)

6. (previously presented) The apparatus of claim 1, wherein at least one of the first electrical conductor and the second electrical conductor provides a sensor lead for sensing a physical property of the battery.

7. (original) The apparatus of claim 1 including a spring coupled to the first and second elongate clamp members configured to urge the first and second jaws together to a closed position.

8. (original) The apparatus of claim 1, wherein the first hand grip and the second hand grip are covered with an insulating material.

9. (original) The apparatus of claim 1, wherein the terminal comprises a tin-plated ring.

10. (original) The apparatus of claim 1, wherein the replaceable fastener comprises a nut and bolt.

11. (previously presented) An apparatus for coupling a battery charger or battery tester to a battery, comprising:

- a cable including a main electrical conductor capable of carrying a charging current and first and second electrical conductors, wherein at least one of first and second electrical conductors provide a Kelvin connection capability for injecting a forcing function into the battery and measuring a voltage across the battery;
- a first elongate clamp member having a first jaw end and a first hand grip end separated by a first pivot coupling, the first elongate clamp member having a conductive piece coupled to the first jaw end for making contact with a contact of the battery and the first hand grip having a first hole formed therein;
- a second elongate clamp member having a second jaw end and a second hand grip end separated by a second pivot coupling, the second elongate clamp member pivotally joined to the first elongate clamp member by the first and second pivot couplings whereby the first and second jaws are generally aligned together;
- a terminal electrically coupled to the cable having a terminal hole formed therein aligned with the first hole in the first hand grip;
- a first electrical plug coupled to the clamp;
- a second electrical plug coupled to the first and second electrical conductors of the cable, wherein the first and second electrical plugs are removably electrically couple together and are housed in the first hand grip;
- a removable fastener which couples the terminal to the first hand grip through the first hole and the terminal hole; and
- wherein the clamp can be disconnected from the cable by removing the removable fastener and unplugging the first and the second electrical plugs.

12. (previously presented) The apparatus of claim 11, wherein the first plug is electrically coupled to the clamp through first and second wire connectors.

13. (previously presented) The apparatus of claim 12, wherein the second plug is electrically coupled to the cable through first and second electrical conductors of the cable.

14. (previously presented) The apparatus of claim 13, wherein the first and second wire connectors and the first and second electrical conductors are configured to removably electrically couple together through the first and second plugs.

15. (previously presented) The apparatus of claim 13, wherein one of the first and second electrical conductors includes two electrically isolated electrical contacts that provide a Kelvin connection.

16. (previously presented) The apparatus of claim 15, wherein one of the first and second electrical conductors comprise a sensor lead.

17. (previously presented) The apparatus of claim 13, wherein the first and second electrical conductors comprise acid-resistant conductors.

18. (currently amended) A method of coupling one of a battery charger and a battery tester to a battery, the method comprising:

providing a cable including a main electrical conductor capable of carrying a charging current and first and second electrical conductors, wherein at least one of the first and second electrical conductors provide a Kelvin connection capability for injecting a forcing function into the battery and measuring a voltage across the battery;

providing a first elongate clamp member of a clamp pivotally joined to a second elongate clamp member by first and second couplings, the first elongate clamp member including:

a first jaw end having a conductive piece coupled to the first jaw end for making contact with a contact of the battery;

a first hole in the first elongate hand grip;

providing a terminal electrically coupled to an end of the main electrical conductor and having a terminal hole formed therein which aligns with the first hole in the first hand grip;

providing a first electrical plug electrically coupled ~~to the coupled~~ to the conductive piece through at least one of first and second wire connectors of the clamp and a second electrical plug electrically coupled to the first and second electrical conductors of the cable;

removably fastening the terminal to the clamp member through the first hole and the terminal hole such that the clamp can be disconnected from the main electrical conductor; and

removably connecting the first electrical plug and the second electrical plug such that the first and second electrical plugs can be electrically disconnected from each other to decouple the first wire connector with the first electrical conductor and the second wire connector with the second electrical conductor, wherein the first electrical plug and the second electrical plug are housed in the first elongate hand grip when electrically coupled together.

19-20. (canceled)

21. (previously presented) The method of claim 18, wherein the first electrical conductor includes two electrically isolated electrical contacts which provide a Kelvin connection and the second electrical conductor comprises a sensor lead.

22. (previously presented) The method of claim 18, wherein the main electrical conductor is capable of carrying a high charging current.

23. (canceled)